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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,534	10/15/2003	Katsuya Oyama	056207.52859US	4049
23911	7590	11/04/2004	EXAMINER	
CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300				LAXTON, GARY L
ART UNIT		PAPER NUMBER		
		2838		

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/684,534	OYAMA ET AL.
	Examiner	Art Unit
	Gary L. Laxton	2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-19 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 15 October 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. ____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>1/14/04</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: ____.

DETAILED ACTION

Inventorship

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in JAPAN on 10/18/2002. It is noted, however, that applicant has not filed a certified copy of the foreign application as required by 35 U.S.C. 119(b).

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the battery of at least claim 1 and the means which stops the output from the second regulator based on the voltage detection means also of claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Applicant's disclosure and drawings do not describe or illustrate a means for stopping the second regulator based on the output of a voltage detecting means that is detecting the output of the first regulator as claimed in claim 1.

Specification

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is

requested in correcting any errors of which applicant may become aware in the specification.

5. The disclosure is objected to because of the following informalities: page 20 line 3-5 recite "As described above, in controller 20 of regulator 2, the starting/stopping of switching device 21 of regulator 2 (starting/stopping of regulator 2) is decided depending on detection signal D6 output from detector 6 and detection signal D7 output from overheating detector 7." Controller 20 being controlled by signal D6 was not previously described as stated in lines 3-5. In fact, the disclosure describes signal D6 controlling regulator 4 by controlling controller 46. Therefore, the statements made on page 20 lines 3-5 seem to be in error.

Appropriate correction is required.

Claim Objections

6. Claim 13 is objected to because of the following informalities: claim 13 recites "an ON signals". It is unclear if there is one signal or plural ON signals. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is misdescriptive. Claim 1 recites a “voltage detecting means” that monitors the first voltage regulator (lines 5-8 of claim 1) and then recites “means” for stopping the second regulator based on the voltage detecting means (lines 9 & 10 of claim 1). As shown in the drawings and described in the specification, the voltage detecting means of the first and second regulators control their respective regulators. There is no disclosure pertaining to the voltage detecting means detecting the first regulator and controlling the second voltage regulator as claimed in claim 1. Claims 2-4 inherit the same through dependency.

Claim 2 recites the limitation "said second generator" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 3 inherits the same from claim 2.

Claim 3 recites the limitation "the voltage output" in line 3. There is insufficient antecedent basis for this limitation in the claim. It is unclear which output voltage the applicant is referring to. Also the recitation “said second regulator that the voltage output has stopped is started..” is vague and confusing due to grammar.

Claim 5 recites the limitation "the first set voltage" in line 9. There is insufficient antecedent basis for this limitation in the claim. Claims 7-19 inherit the same through dependency.

Claim 6 recites the limitation "the battery" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the battery voltage" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the first voltage output" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the second voltage output" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the voltage output" in line 12. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 line 4 has the same issue as claim 3 stated above in regards to grammar.

Claim 11 recites the limitation "the third set voltage" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "the third fixed voltage" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 13 line 4 has the same issue as claims 3 and 9 stated above in regards to grammar.

Claim 14 is vague and confusing. Claim 14 recites when the first voltage output from the first regulator is abnormal is a hysteresis voltage. It is unclear what the applicant means by this.

Claim 15 recites the limitation "the internal temperature" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recites the limitation "the preset temperature" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation "the set temperature" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 19 recites “a going up and down pressure switching regulator”, it is unclear what the applicant means by this limitation. What is going up and down?

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki Toshitatsu (11-265225 supplied by applicant).

Due to the numerous errors and 112 2nd paragraph rejections the rejections are based on the best understanding of the claim language.

Claims 1-4; Suzuki Toshitatsu is considered to disclose the claimed subject matter of claims 1-4 including an electric power supply unit comprising; a first regulator which converts the voltage of a battery into a fixed voltage, a second regulator which generates a lower voltage than the first regulator, a voltage detection means (51) which outputs an OFF signal when the output voltage of the first regulator drops less than a first set voltage, and outputs an ON signal when the output voltage of the first regulator rises more than a second set voltage, and a means which stops the voltage output from the second regulator when the OFF signal is output from second voltage detection means (21 or 31).

11. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Mori (US 5,216,353).

Due to the numerous errors and 112 2nd paragraph rejections the rejections are based on the best understanding of the claim language.

Claims 1-4; Mori is considered to disclose the claimed subject matter of claims 1-4 including an electric power supply unit comprising; a first regulator which converts the voltage of a battery into a fixed voltage, a second regulator which generates a lower voltage than the first regulator, a voltage detection means (32B) which outputs an OFF signal when the output voltage of the first regulator drops less than a first set voltage, and outputs an ON signal when the output voltage of the first regulator rises more than a second set voltage, and a means which stops the voltage output from the second regulator when the OFF signal is output from second voltage detection means (34A).

12. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by McKenzie (US 5,336,985).

Due to the numerous errors and 112 2nd paragraph rejections the rejections are based on the best understanding of the claim language.

Claims 1-4; McKenzie is considered to disclose the claimed subject matter of claims 1-4 including an electric power supply unit comprising; a first regulator which converts the voltage of a battery into a fixed voltage, a second regulator which generates a lower voltage than the first regulator, a voltage detection means (52) which outputs an OFF signal when the output voltage of the first regulator drops less than a first set voltage, and outputs an ON signal when the output

voltage of the first regulator rises more than a second set voltage, and a means (50, 48) which stops the voltage output from the second regulator when the OFF signal is output from second voltage detection means (48).

Allowable Subject Matter

13. Claims 5-19 would be allowable if rewritten or amended to overcome the objections note above and the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

14. The following is a statement of reasons for the indication of allowable subject matter:

Claims 5 and 7-19; prior art fails to disclose or suggest, *inter alia*, an electric power supply unit comprising: a first regulator which converts a battery voltage supplied by the battery into a first voltage; a third regulator which converts the first voltage from the first regulator into a second voltage; a second regulator which converts the first voltage output from the first regulator into a third voltage; a first voltage detection means which outputs an OFF signal when the second voltage output from the third regulator drops less than a first set voltage, and outputs an ON signal when the second voltage output from the third regulator rises more than a second set voltage, and a means which stops the voltage output from the second regulator when an OFF signal is output from the first voltage detection means.

Claim 6; prior art fails to disclose or suggest, *inter alia*, an electric power supply unit comprising; a first regulator which converts a battery voltage into a first voltage; a third regulator which converts the first voltage output from the first regulator into a second voltage; a second regulator which converts the second voltage output from the third regulator into a third voltage; a first voltage detection means which outputs an OFF signal when the second voltage output from the third regulator drops less than a first set voltage, and outputs an ON signal when the second voltage output from the third regulator rises more than a second set voltage, and a means which stops the voltage output from the second regulator when an OFF signal is output from the first voltage detection means.

Art Unit: 2838

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Laxton whose telephone number is (571) 272-2079. The examiner can normally be reached on Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



10/29/04

Gary L. Laxton
Patent Examiner
Art Unit 2838